REMARKS

Claims 1-26 are pending in the application.

Claims 1-26 have been rejected.

Claims 12, 20, and 25 have been amended to correct minor informalities.

No new matter has been added.

Reconsideration of the Claims is respectfully requested.

1. Objections

Claims 12 and 25 had been objected to as to improper dependent form, and in view of informalities, respectively.

Appropriate correction has been made.

2. Rejection under 35 U.S.C. Section 102

Claims 1, 3, 15, 16, and 26 were rejected under 35 U.S.C. 102(e) as being clearly anticipated by Lueck et al. (USPN 6,721,710) (hereinafter Lueck).

For establishing anticipation, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. . . . The identical invention must be shown in as complete detail as is contained in the . . . claim." MPEP 2131 at p. 2100-67 (Rev. 5, August 2006) (citations omitted).

Lueck relates to "performing audible fast-forward/reverse of audio content represented in a compressed format, such as, but not limited to, MPEG-1 Layer 3 (MP3) or MPEG-2 Advance Audio Coding (AAC) [that utilize variable length coding]." (Lueck 2:15-19; 1:40-42).

Lueck recites "a platform 100 [that] also includes a flash memory 140, which is preferably removable, for storing the digital audio data." (Lueck 3:10-12). The equalizer volume tone balance 185 is a function of the DSP 110, which "in addition to decoding also performs equalization, volume, tone, and balance control functions 185 responsive to control signals from the microcontroller [120] as a result of user interactions with control keys in the keypad 124. Alternatively, the power amplifier [180] may be responsive to control signals from the microcontroller 120 (or the DSP 120) for volume, tone, and balance control." (Lueck 3:35-40).

As understood, the DSP 110 and the power amplifier 180 of Lueck do not include a filter co-processor to "filter the digital audio information." Moreover, Lueck does not recite an integrated circuit that comprises, *inter alia*, "a processing module" and "a filter co-processor." Also, Lueck does not recite a method for operating an audio playback device in which, *inter alia*, "filtering, by the filter co-processor, the digital audio information to produce filtered digital audio information." Additionally, the Office Action notes that "Lueck . . . is silent with respect to the filter co-processor, or digital signal processor (DSP)." (Office Action at p. 4, ¶ 12).

As explained in Applicant's Specification at page 2, "[p]owering a processor such as a Digital Signal Processor has historically been required to service all operations of the handheld device, which consumes significant power. The processor is underutilized during most operations but continues to consume significant power. Further, in other operations the processor becomes overloaded with basic processing functions, e.g., filtering functions, such that it is unable to service all desired functions." (Specification at page 2, lines 17-22).

Accordingly, Applicant's Independent Claim 1 recites, *inter alia*, an "integrated circuit used in an audio playback device, the integrated circuit comprising: . . . *a processing module* operably coupled to the host interface; . . . and a *filter co-processor* operably coupled to the processing module and to the memory, wherein *at the direction of the processing module* the filter co-processor retrieves digital audio information from the memory and *filters the digital audio information*." (emphasis added).

Also, Applicant's Independent Claim 15 recites, *inter alia*, a "method for operating an audio playback device comprising: . . . directing, *by a processing module*, *a filter co-processor to perform filtering operations*; . . . filtering, by the filter co-processor, the digital audio information to produce filtered digital audio information; and storing the filtered digital audio information in the memory." (emphasis added).

Further, Applicant's Independent Claim 26 recites, *inter alia*, a "integrated circuit used in an audio playback device, the integrated circuit comprising: . . . *means for directing, by a processing module, a filter co-processor to perform filtering operations*; . . . means for *filtering, by the filter co-processor, the digital audio information to produce filtered digital audio information*; and means for storing the filtered digital audio information in the memory." (emphasis added).

Applicant respectfully submits that each and every element as set forth in its claimed claims is *not* found, either expressly or inherently described, in Lueck, nor is the identical invention shown in as complete detail as is contained in Applicant's claims.

3. Rejection under 35 U.S.C. Section 103

Claim 2 was rejected under 35 U.S.C. 103(a) as being unpatentable over Lueck as applied to claim 1 above, and further in view of US Patent No. 5,911,082 to Monroe et al. ("Monroe").

Claims 4, 13, 14, 17, 24, and 25 were rejected under 35 U.S.C. 103(a) as being unpatentable over Lueck as applied to claim 3 above, and further in view of US Patent No. 5,963,153 to Rosefield et al. ("Rosefield").

Claims 5, 6, 18, and 19 were rejected under 35 U.S.C. 103(a) as being unpatentable over Lueck as applied to claim 3 above, and further in view of U.S. Patent No. 5,524,022 to Kihara et al. ("Kihara").

Claims 7, 8, 20, and 21 were rejected under 35 U.S.C. 103(a) as being unpatentable over Lueck as applied to claim 1 above, and further in view of U.S. Patent No. 5,491,774 to Norris et al. ("Norris").

Claims 9-12 and 22-23 were rejected under 35 U.S.C. 103(a) as being unpatentable over Lueck as applied to claim 1 above, and further in view of U.S. Patent No. 6,282,661 to Nicol ("Nicol").

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. MPEP § 2142, p. 2100-125 (Rev. 5, August 2006) (citations omitted).

In general, as Applicant respectfully submits as Lueck does not provide a basis for anticipation to its independent claims, Applicant also respectfully submits that the proposed combination of Lueck with the additional cited references does not set forth a *prima facie* showing of obviousness to its dependent claims because all of Applicant's claim limitations are not taught or suggested.

With respect to Applicant's dependent Monroe relates to a "parallel processing building block (PPBB) chip 10 . . . as a solution to the set top box market which can also serve additional functions such as Internet access and tuner control." (Monroe 1:53-56). The "chip 10 includes three distinct processors in the form of a low performance digital signal processor (DSP) 28, a medium performance DSP 30 and a high performance DSP 32. Each DSP 28, 30 and 32 includes a JTAG section 34. The JTAG sections 34 are daisy-chained together to the JTAG interface 26 on the chip 10." (Monroe 4:30-33). As understood, these daisy chained processors provide parallel processing, but not "filter co-processor" capability. Indeed, the set-top building block chip device of Monroe does not recite filter functions generally.

Rosefield relates to a "sample rate conversion system and method uses a digital signal processor (DSP) and a separate sample rate conversion circuit (SRC) to perform multiple stream conversion and mixing of different rate input audio streams." (Rosefield 2:23-26). Rosefield was cited for interpolation, in that Rosefield's "sample rate conversion system converts data, such as multiple streams of digital audio data sampled at different rates, and performs interpolation, decimation, FIR filtering, and mixing of multiple streams of data using the separate SRC." (Rosefield 2:26-30). The sample rate conversion system of Rosefield, does not, however, recite an integrated circuit playback device including a "filter co-processor" such as that recited in Applicant's claimed invention.

Kihara relates to a "digital graphic equalizer which has the boost characteristic and attenuation characteristic that are symmetrical curves with respect to the reference level, and has small S/N deterioration." (Kihara 2:49-52). The digital graphic equalizer of Kihara, however, does not recite an integrated circuit playback device including a "filter co-processor" such as that recited in Applicant's claimed invention.

Norris relates to a "a record/playback device utilizing a computer chip memory which offers long play operation similar to standard cassette tapes or compact disks." (Norris 2:45-48). Filtering, as recited in Norris, relates to "illustrated capacitors [that] are used for noise filtering." (Norris 10:38-40). That is, Norris does not recite a recording mode in which a "filter co-processor, at the direction of the processing module, . . . filters the incoming digital audio information to produce filtered incoming digital audio information . . . ."

Nicol relates to a "DSP 102 [that] is programmed to implement the desired modem functions and be arranged to implement many modem protocols. Typically, the functions programmed in

DSP 102 are those employed in the latest modems . . . ." (Nicol 53-65). The modem device of Nicol was cited for "power reduction in integrated circuits." Nicol, however, does not recite an integrated circuit used in an audio playback device, in which that device includes, *inter alia*, a "filter co-processor."

Applicant respectfully submits that these additional references cited for the hypothetical combination with Lueck have a suggestion/motivation that improperly stems from Applicant's Specification. The Federal Circuit has noted that "an examiner may often find every element of a claimed invention in the prior art. If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue. Furthermore, rejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. Such an approach would be 'an illogical and inappropriate process by which to determine patentability.'" In re Rouffet, 149 F.3d 1350, 1357 (Fed. Cir. 1998) (citations omitted).

In this regard, "[to] prevent the use of hindsight based on the invention to defeat patentability of the invention, [the Federal Circuit] requires the examiner to show a motivation to combine the references that create the case of obviousness. In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed." *Id.*

Accordingly, Applicant respectfully submits that there has not been a *prima facie* showing that substantiates the rejection of Applicant's claimed invention. There is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the various diverse references cited in hypothetical combination with Lueck to achieve Applicant's claimed invention as set out in its dependent claims.

4. Conclusion

As a result of the foregoing, the Applicant respectfully submits that Claims 1-26 in the Application are in condition for allowance, and respectfully requests an early allowance of such Claims.

If any issues arise, or if the Examiner has any suggestions for expediting allowance of this Application, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at ksmith@texaspatents.com.

The Commissioner is hereby authorized to charge any additional fees connected with this communication or credit any overpayment to SigmaTel Deposit Account No. 50-1415.

Respectfully submitted,

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